

### **Abstract of the Disclosure**

Cardioplegia is delivered to a heart vessel by conducting the cardioplegia through an infusion lumen of a cannula. The cardioplegia communicates with a balloon disposed on a distal end of the cannula to cause the cardioplegia to inflate the balloon into sealing contact with a wall of the coronary sinus. The flow of cardioplegia is halted while preventing drainage of cardioplegia from the balloon, to maintain the balloon in its inflated state until such time as the flow of cardioplegia is resumed. Drainage of cardioplegia from the balloon is prevented by causing a valve to be shifted to a closed position blocking communication between the infusion lumen and the balloon. The valve can be shifted manually, or automatically in response to the halting of the delivery of cardioplegia.